

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 March 2005 (24.03.2005)

PCT

(10) International Publication Number
WO 2005/026583 A1

(51) International Patent Classification⁷: **F16H 55/17**

(74) Agents: **IMAI, Jeffrey, T. et al.**; Magna International Inc.,
337 Magna Drive, Aurora, Ontario L4G 7K1 (US).

(21) International Application Number:
PCT/CA2004/001642

(22) International Filing Date:
20 September 2004 (20.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/504,570 18 September 2003 (18.09.2003) US

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (for all designated States except US): **LITENS AUTOMOTIVE PARTNERSHIP** [CA/CA]; 730 Rowntree Dairy Road, Woodbridge, Ontario L4L 5T9 (CA).

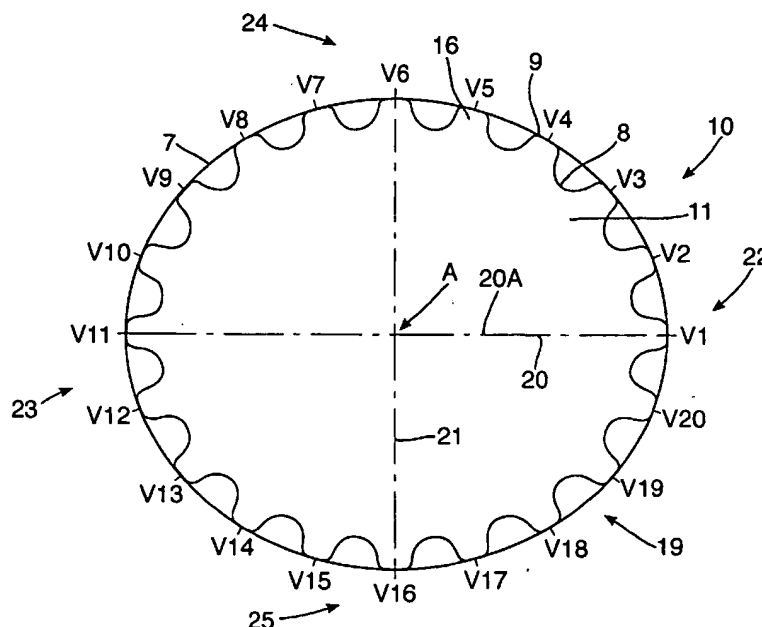
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **GAJEWSKI, Witold** [CA/CA]; 75 Summitcrest Drive, Richmond Hill, Ontario L4S 1A8 (CA).

[Continued on next page]

(54) Title: NON-CIRCULAR ROTARY COMPONENT



(57) Abstract: A non-circular sprocket component comprises a rotor (11) having a plurality of teeth (16) arranged around the perimeter of the rotor, each tooth having a crown (9), and each pair of adjacent teeth having a valley (8) therebetween. The crowns of the teeth lie on a curved envelope forming the perimeter of the rotor. The perimeter has a non-circular profile having at least two protruding portions (22, 23) alternating with receding portions (24, 25). The distance between the midpoints (V) of the crowns (9) of each pair of adjacent teeth is substantially the same. The profile of the valley (8) between each pair of adjacent teeth is substantially the same. The distance between the midpoint (V), of each crown (9) and the axis (A) of the rotor varies around the perimeter to produce the said non-circular profile.

WO 2005/026583 A1

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.